Fiscal Deficit and Economic Growth in Pakistan

New Evidence

Nasir Iqbal, Musleh ud Din & Ejaz Ghani

Outline

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Background



Background

- The reduction in Fiscal Deficit (FD) has been attributed to following three factors:
 - over 20% growth in FBR tax collections;
 - a fall in debt servicing expense that helped contain the growth in federal current expenditures; and
 - higher surpluses recorded by provincial governments
- It is also observed that reduction in FD has been accompanied by a healthy growth in revenues and slight contraction in total expenditure as % of GDP

Financing of FD

Billion rupees

	FY15	FY16
Financing	1,457	1,349
External	181	370
Domestic	1,276	979
Bank	892	787
Non-bank	366	192
Privatization	18	0

Fiscal Deficit – Target and Actual (%of GDP)



Performance in Q1-FY17

Fiscal balance Revenue balance Primary balance 0.40.0 -0.4 +0.4 bercent -0.8 -1.2-1.6 Q1-FY12 Q1-FY15 Q1-FY16 Q1-FY17 Q1-FY13 Q1-FY1

Policy Questions & Objectives

Questions

- What is the level of FD that can be maintained without jeopardizing economic growth?
 - What is threshold level of FD?

Objective

 To explore the relationship between FD and economic growth with a particular focus on identification of the threshold level of FD that can serve as a benchmark for macroeconomic

Methodology

- FD-growth nexus can be viewed from different theoretical perspectives.
 - Neoclassical
 - Keynesian
 - Rational Expectations
- To conceptualize the role of FD in economic growth, we use the growth model proposed by <u>Mankiw, Romer, and Weil (1992)</u> "MRW" model with an addition of FD as an explanatory variable

 $y_{it} = A_t k_t^{\alpha} h_t^{\beta} F D_t^{\gamma} e^{\varepsilon t}$

Methodology

Log transformation

 $\log(y_t) = \log C_0 + dt + \alpha \log(k_t) + \beta \log(\mathbf{h}_t) + \gamma \log(FD_t) + \varepsilon_t$

 To incorporate the possibility of non-linearity in the model, this study considers a tworegime logistic Smooth Transition Auto-Regressive (STAR) model

$$\begin{split} \log(y_t) &= \alpha + b_1 \log(k_t) + c_1 \log(\mathbf{h}_t) + d_1 \log(\mathrm{FD}_t) \\ &+ (b_2 \log(k_t) + c_2 \log(\mathbf{h}_t) + d_2 \log(\mathrm{FD}_t)) G(q_{t-j}, \gamma, \theta) + \varepsilon_t \end{split}$$

Methodology

- Analysis: Time-series data [1972-2014]
- Stationary properties [ADF test]
- ARDL approach proposed by <u>Pesaran, Shin,</u> <u>and Smith (2001)</u> to examine the long run relation
- Smooth Transition Auto-Regressive (STAR) model proposed by <u>Teräsvirta (1998)</u> to estimate threshold level of fiscal deficit for Pakistan

Results and Discussion

STAR model with logistic transition function estimates

Variables	Coefficient	Std. Error	T-Statistics	
The Linear Part of the Model				
Lnk _t	0.78	0.27	2.95***	
Lnh_t	-0.20	0.71	-0.28	
$LnFD_t$	-0.07	0.22	-0.34	
Constant	1.54	1.03	1.49	
The Non-Linear Part of the Model				
Lnk _t	-0.94	0.34	-2.74***	
Lnh_t	2.72	0.96	2.84***	
$LnFD_t$	-0.06	0.02	-2.60***	
Constant	7.03	2.51	2.80***	
Slope Parameter γ	2.46	1.98	1.24	
Threshold Extreme C	1.72	0.10	17.42***	
\overline{R}^2		0.97		
ARCH-LM Test [p-Value(F)] [T-Stat]		0.51 [6.09]		
Normality Fest (JB test) [p-Value(Chi^2)] [T-Stat]		0.23	0.23 [2.86]	

Comparative Analysis of Two Regimes



Conclusions and Policy Implications

- Threshold level of FD is 5.57% of GDP
- Overall FD has a negative impact on economic growth in Pakistan as it has remained mostly above the threshold level
- There is room for fiscal policy to be growthpromoting
- However, prudent macroeconomic management is needed to channel public investment for raising long term growth potential
- Sectoral targets for public investment to be chosen so as to enhance marginal productivity of private investment
 - For example public investments in physical infrastructure and social sectors